胰腺腺泡细胞癌的CT表现

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［摘要］ **背景与目的：**胰腺腺泡细胞癌(acinar cell carcinoma of the pancreas，ACCP)是一种罕见的胰腺恶性肿瘤，相关的影像学报道较少。该研究旨在探讨ACCP的CT表现。**方法：**收集自2011年1月—2014年1月经手术病理证实为ACCP的9例患者资料，回顾性分析其CT征象。**结果：**在9例ACCP患者中，肿块最大径均值为52 mm，肿瘤边缘不清的6例(66.7%)，外生型生长者有6例(66.7%)，强化程度低于正常胰腺组织者8例(88.9%)，强化不均者6例(66.7%)，累及血管者7例(77.8%)，淋巴结转移者5例(55.6%)，无出现肝转移病例，仅1例出现胰管扩张。**结论：**较大体积的乏血供胰腺肿块，内部异质性明显，呈外生型生长而无显著胰管扩张时，提示ACCP的可能。

［关键词］ 胰腺肿瘤；腺泡细胞癌；计算断层扫描
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CT characteristics of acinar cell carcinoma of the pancreas

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［**Abstract**］ **Background and purpose:** Acinar cell carcinoma of the pancreas (ACCP) is a rare malignant tumor and a few radiologic reports have been published. This study aimed to evaluate the CT characteristics of ACCP. **Methods:** CT signs of 9 cases of pathologically confirmed ACCP were analyzed retrospectively. **Results:** The mean value of longest diameter of the 9 cases of ACCP was 52 mm. Among the 9 cases, 6 cases (66.7%) had ill-defined border, 6 cases (66.7%) showed exophytic type, 8 cases (88.9%) showed enhancement degree less than normal pancreatic tissue, 6 cases (66.7%) represented heterogeneous enhancement, 7 cases (77.8%) showed invaded vessel, 5 cases (55.6%) had lymph node metastasis, and none had hepatic metastasis. Dilated pancreatic duct was observed in only 1 case. **Conclusion:** When pancreatic mass is large, heterogeneous, exophytic and without dilated pancreatic duct, ACCP is suggested.

［**Key words**］ Pancreatic neoplasm; Acinar cell carcinoma; Computed tomography

胰腺腺泡细胞癌(acinar cell carcinoma of the pancreas，ACCP)，是一种罕见的胰腺肿瘤，占所有胰腺肿瘤的比例不到1%。ACCP多发于40～70岁的中老年患者，男性多见[1]。与常见的胰腺导管腺癌(ductal adenocarcinomas of the pancreas，DACP)相比，ACCP的预后较好[2]；一项包含了ACCP伴有限转移病例的研究表明，ACCP的1、2和3年的总生存率分别达88%、65%和47%[3]。国内外已有一些学者通过回顾性研究ACCP的影像学表现，获得了能在术前提示ACCP诊断的线索[4-6]。鉴于ACCP不同于DACP的预后表现，本研究旨在熟悉该病的术前影像学表现。

1 资料和方法

1.1 临床资料

本研究收集了2011年1月—2014年1月经手术

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病理证实为ACCP且有CT影像学资料的病例共9例，其中男性8例，女性1例；年龄28～77岁，中位年龄56岁。6例患者出现不同的临床症状，其中腹部隐痛3例，左侧腰背部疼痛1例，腹胀1例，外伤后腹痛、腹胀1例；3例患者无临床症状。共有8例患者进行了肿瘤血清标志物检查，结果显示，AFP升高5例，CA119升高2例，CA125升高1例，CA724升高3例，CA50升高2例，CA242升高2例，CA153升高1例，CEA升高2例。

1.2 CT检查方法

1.2.1 CT检查设备及扫描参数

所有病例均采用德国西门子多探测器CT扫描仪(Somatom Sensation 40或Somatom Sensation 64)。扫描管电压120 kV，管电流250 mA，层厚3 mm。增强扫描采用非离子型造影剂(碘海醇，300 mg/mL，中国Amersham公司；或碘帕醇300 mg/mL，中国Bracco Sine公司)。高压注射器(德国Ulrich Medizintechnik公司)的注射速率为3 mL/s，动脉期25 s延时扫描，门脉期60 s延时扫描。扫描范围包括双侧膈肌和髂嵴平面。

1.2.2 CT图像判读方法

两位放射科主治医生对病灶的CT表现进行评价，若意见不一致则采用协商解决的方法。评价指标包括病灶的部位(胰头、胰颈、胰体和胰尾)、形态(圆形、卵圆形和不规则形)、边缘(清晰和不清晰)、最大径、生长方式(内生型、外生型和混合型)、强化程度(相对于胰腺实质)、强化方式(均匀强化和不均匀强化)、有无强化包膜、有无钙化、有无坏死囊变(CT值小于20 Hu)、有无胰胆管扩张(胰管内径大于3 mm，胆管内径大于10 mm)、有无血管累及、有无淋巴结转移和有无肝脏转移。

2 结　果

肿瘤发生于胰腺头部的2例(22.2%)，胰颈的1例(11.1%)，体部的3例(33.3%)，尾部的3例(33.3%)。肿瘤形态呈圆形的2例(22.2%)，卵圆形的4例(44.4%)，不规则形的3例(33.3%)。肿瘤边缘清晰的3例(33.3%)，边缘不清的6例(66.7%)。肿块最大径17～97 mm，平均52 mm。肿瘤外生型生长的6例(66.7%)，内生型生长的3例(33.3%)。肿瘤强化程度低于正常胰腺实质的8例(88.9%)，高于胰腺实质的仅1例(11.1%)。肿瘤强化均匀的3例(33.3%)，强化不均的6例(66.7%)。瘤内出现坏死、囊变的5例(55.6%)，出现包膜强化的3例(33.3%)，出现钙化的1例(11.1%)。有7例(77.8%)出现肿瘤累及邻近血管，5例(55.6%)出现淋巴结肿大。胰胆管扩张仅1例(11.1%)。所有病例均未出现肝转移的征象(图1、2，表1)。

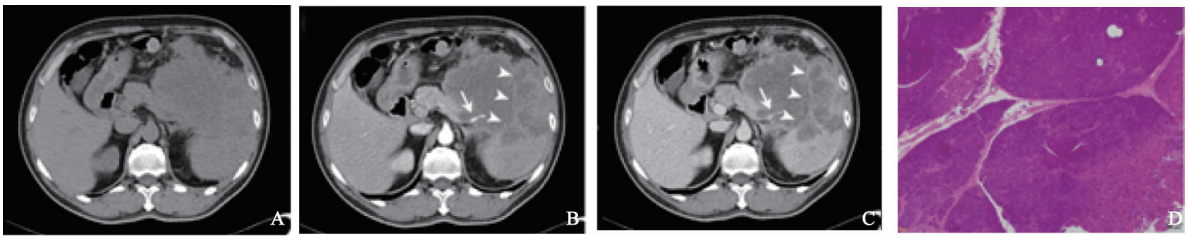

图 1　1例58岁男性ACCP患者CT及病理诊断图像

Fig. 1　CT imaging and pathological diagnosis of a 58-year old male with ACCP

A: Non-enhanced phase; B: Arterial phase; C: Portal venous phase, a large exophytic mass illustrated heterogeneous mild enhancement that invaded adjacent vessels and spleen (arrow); D: Microscopic examination depicted that tumor cells were acinous, block or strip and fibre septa was observed (HE×100)

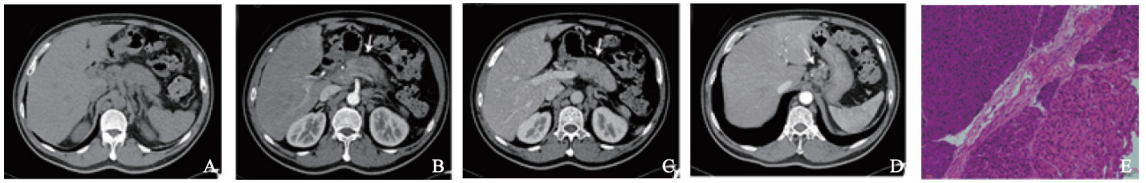

图 2　1例52岁男性ACCP患者CT及病理诊断图像

Fig. 2　CT imaging and pathological diagnosis of a 52-year old male with ACCP

A: Non-enhanced phase; B: Arterial phase; C: Portal venous phase; D: Portal venous phase at higher level; E: Microscopic examination depicted that tumor cells were acinous, block or strip and fibre septa were observed. A endophytic mass (arrow in B and C) in the body of pancreas illustrated heterogeneous mild enhancement with ill-defined border (HE×200). Lymphatic metastases were founded at lesser curvature of stomach (arrow in D)

表 1　ACCP患者的CT表现

Tab. 1　CT characteristics of ACCP patients

Patient	Location	Shape	Border	Long diameter *d*/mm	Growth pattern	Enhancement degree	Enhancement pattern	Calcification	Necrosis/cystic degeneration	Enhancing capsule	Cholangiopancreatic dilatation	Invaded vessel	Lymphatic metastasis	Hepatic metastasis
1	Body	Ovoid	Ill-defined	24	Endophytic	Low	Homogeneous	No	No	No	No	No	Yes	No
2	Tail	Irregular	Ill-defined	97	Exophytic	Low	Heterogeneous	No	Yes	Yes	No	Yes	Yes	No
3	Head	Round	Well-defined	46	Exophytic	Low	Heterogeneous	Yes	No	Yes	No	Yes	No	No
4	Body	Round	Ill-defined	22	Endophytic	Low	Homogeneous	No	No	No	No	Yes	No	No
5	Tail	Ovoid	Ill-defined	60	Exophytic	Low	Heterogeneous	No	Yes	Yes	No	Yes	Yes	No
6	Neck	Ovoid	Well-defined	17	Endophytic	High	Homogeneous	No	No	No	No	No	No	No
7	Body	Ovoid	Well-defined	79	Exophytic	Low	Heterogeneous	No	Yes	No	No	Yes	No	No
8	Tail	Irregular	Ill-defined	86	Exophytic	Low	Heterogeneous	No	Yes	No	No	Yes	Yes	No
9	Head	Irregular	Ill-defined	38	Exophytic	Low	Heterogeneous	No	Yes	No	Yes	Yes	Yes	No

3 讨 论

虽然胰腺中80%以上的组织由腺泡细胞构成，仅4%的组织由导管上皮构成，但ACCP的发病率远低于DACP[7]。有研究表明，micro RNA表达的改变和胰腺腺泡的瘤性转化及恶性转变相关[8]。在影像学方面，ACCP和DACP增强扫描的强化强度均低于周围的正常胰腺组织，这说明两者血供均不及正常胰腺组织丰富[9-10]，从而导致两者的影像学表现有较大重叠。下述征象可能有助于两者的鉴别：与常见的DACP相比，ACCP肿瘤体积更大。有文献报道，DACP肿瘤最大径为2~3 cm，而ACCP肿瘤最大径达5 cm[9, 11]，与本研究的结果一致。本研究中，6例患者的ACCP边缘不清，7例患者出现周围血管受侵，本研究结果与以往的研究并不一致可能与本组病例的侵袭性较强有关。一些学者[9-12]观察到约50%的ACCP周围出现强化的包膜，并认为该征象有助于和DACP的鉴别诊断；但本研究结果显示，仅3例患者出现强化的包膜(33.3%)，与上述报道的结果有差异。ACCP的肿瘤异质性明显，但钙化少见；本组有5例患者出现坏死或囊变现象，也有学者报道过ACCP因分泌胰酶的自身消化作用而呈现为巨大的囊性肿块[13]，甚至出现脂肪变性现象[14]。由于ACCP起源于胰腺的腺泡细胞而不是胰腺导管的上皮细胞，因此出现胰胆管扩张的情况并不多见[11]。本组病例虽然有3例发生于胰头部位，但均未见明确的胰胆管扩张。本研究还发现，ACCP的区域性淋巴结转移相对多见而肝转移则较为罕见。本研究结果显示，4例患者出现区域性淋巴结转移，但肝转移病例，与以往的文献报道相符合[11]。

ACCP的病理学诊断有赖于形态学和免疫组织化学结果，CAM5.2、α1-AT和α1-ACT呈弥漫性阳性，CEA、CA199、E-cadherin和β-cantenin呈灶性阳性[15-16]，特征性的过碘酸-schiff染色阳性表现为突触囊泡蛋白和嗜铬粒蛋白阴性或仅为局灶性阳性[1, 17]。ACCP的主要治疗方法是手术切除，对于一些治疗DACP和结肠直肠腺癌敏感的化疗药物，ACCP的化疗敏感性仅是轻度敏感[18]，对于不可切除的病例，也有学者采用FOLFIRINOX作为一线的化疗方案进行治疗[19]。据文献报道，ACCP作为一种外分泌肿瘤，偶尔能将胰酶释放入血液循环系统，从而产生全身性的症状，如发热、关节痛、皮疹和脂肪坏死，被称之为脂肪激酶分泌过多综合征[1, 11, 17]。本研究的9例患者在就诊时均未发现脂肪激酶分泌过多综合征的相关症状。Radhi等[20]报道ACCP患者以男性居多。本研究的病例也体现出了明显的性别差异，9例ACCP中仅1例为女性。

目前尚未发现ACCP的特异性肿瘤标志物。本研究结果显示，AFP、CA119、CA125、CA724、CA50、CA242、CA153和CEA升高的病例呈分散分布，未显示出某项肿瘤学指标具有特异性。

综上所述，若发现较大体积的缺乏血供的胰腺肿块，肿块内部异质性明显，呈外生型生长而无显著的胰管扩张时，则需考虑ACCP的可能。

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